Case 1:21-cv-00260-PB Document 62-19 Filed 05/05/22 Page 1 of 2

LBRY Download Use on Web (lbry.tv) Community bry.org Meet, chat, and party in the heart of the LBRY community. YouTube Partner Program Sync your content instantly and start garning Frequently Asked Questions Got questions?

We probably have answers! Blockchain Explorer Look up transactions and claims on the LBRY blockchain.

Social

Company will bry on LBRY Everything about LBRY, from LBRY, on LBRY Company News The latest from the LBRY team The Team Meet the people building LBRY and why they're doing a Roadmap The next steps in our journey Contact Have a question or want to connect with the LBRY, like, team? Credit Reports Quarterly reports on LBRY's blockchain assets Developers LBRY tech Find a technical overview, specification, APIs, and more Follow @Ibrytech on LBRY From the devs. for the devs. The Spec Read a formal technical description of how LBRY works GitHub All LBRY code is public and open-source Contributor's Guide Become a contributor to the LBRY project Search lbry, ty Menu Open LBRY

HF1910: A Blockchain Hard Fork on October 30th, 2019

Alex Grintsvayg • Oct 3 2019

Update 2019-10-30 10:24am EST: The fork is live. Block 658309 occurred on October 30 at 9:53am ET. The prefork chain halted at that block, while the postfork chain is proceeding normally (at block 658325 at the time of writing).

Update 2019-12-11 9:40am EST: The final upgrade, SegWit support, is now live. Block 680770 occurred on December 11 at 2:45am ET. All pool and exchange operations are functioning as normal at this time.

What's Changing

The LBRY blockchain will experience a hard fork (named IIF1910) on October 30th, 2019, to enable the ability to prove the existence of non-winning claims (via Merkle tree proofs).

Staked claims compete against others of the same name. The intention was that their existence would be provable with a mechanism similar to "simplified payment verification" (SPV), thus reducing the need for a secure connection to (or local instance of) lbrycrd for verification purposes. Prior to the hard fork, only the winning claim for any given name is included in the block hash. This made it difficult to authoritatively verify the existence of non-winning claims when they were queried from librycrd over an insecure connection. For further documentation on the claimtrie, see https://spec.lbry.com#elaimtrie.

To address this limitation, after HF1910 lbrycrd will percolate all claim IDs into the trie root hash. Simultaneously, the mechanism for computing the hash of the claims and node children in the trie will change to use an actual Merkle tree (rather than string append) for the hash computation. This significantly reduces the output of the proof RPC methods and allows us to take advantage of newer SIMD instructions for the hash computations.

HF1910 will activate on the mainnet at height 658300, with a second phase on block 658309, which both should take place on October 30th, 2019. The testnet activation will happen today at block 1198550. Regtest activates HF1910 at height 350.

A third and unrelated hard-fork phase for enabling Segwit will take place on December 11, 2019, at block 680770. We expect that it will take some time before the LBRY SDK and other LBRY tools support Segwit transactions.

Please note that the block rewards, token distribution, etc. are all staying the same.

What You Should Do

For most people, nothing needs to be done. The fork will take effect transparently and won't change your experience of LBRY.

If you are running a full node, upgrade to the latest version of lbrycrd as soon as possible. Pre-built binaries are available on the releases page: https://github.com/lbryio/lbrycrd-teleases. You will need version 0.17.3.1 or higher. Please read the release notes.

We will post updates about HF1910 to this page. If you want to be notified of news about this fork and future forks, please join the fork mailing list.

EXHIBIT

21-cv-00260-PB

SEC-LBRYLIT-E-0005107

Case 1:21-cv-00260-PB Document 62-19 Filed 05/05/22 Page 2 of 2

← Hacktoberfest 2019! Fly into the future with LBRY Galileo ← Alex Grintsvayg · · · ·

Alex, AKA Grin, drives technology development at LBRY and manages infrastructure growth. Grin has previously designed and managed scalable infrastructure solutions for SaaS firms. Bringing LBRY to mainstream scale is his primary goal. Alex holds degrees in Computer Science and Psychology from Rensselaer Polytechnic Institute.

- Company
- · About
- · Blog
- · Roadmap
- · Shop
- · Team
- Use LBRY
- · Ibry.tv
- · Android
- · Linux
- · iOS
- · macOS
- Windows
- · Social
- · Chat on Discord
- · Twitter
- · Reddit
- · Facebook
- · Telegram
- Support
- · hello@lbrv.com
- · Contact
- · Privacy
- · TOS
- · FAQ
- · Free Speech Flag
- · Back to top